

#### Primary targets:

BIOSWALES and RAIN GARDENS



From Merriam-Webster:

# bioswale bio-(,)ō-,swal

: a long, channeled depression or trench that <u>receives rainwater</u> runoff (as from a parking lot) and has <u>vegetation</u> (such as grasses, flowering herbs, and shrubs) and organic matter (such as mulch) to <u>slow water</u> <u>infiltration</u> and <u>filter out pollutants</u>











# It takes less time to do a thing right, than it does to explain why you did it wrong.

Henry Wadsworth Longfellow



# Objectives of Bioswales & Rain Gardens:

- Soil stabilization
- Increased infiltration
- Filter pollutants
- Reduced stormwater runoff reaching streams
- Increased biodiversity
- Improved aesthetics



# Success complicated by plant issues:

- Sunlight
- Tolerance to flooding/droughts
- pH fussiness
- Maintenance
- Size
- Pests



### Want a "One Size Fits All" plant list??

Too Bad!

How can we simplify and increase success?

- 1. Avoid <u>pitfalls</u> and lack of consideration for long term nature of project (Make it <u>SUSTAINABLE!</u>)
  - 2. Simplify plants in each project



#### Common Under-Considered Pitfalls

- Poor/No soil prep
  - We want these pools to drain
- Where will the water go?
  - Be prepared to adjust after installation
- Lousy plant stock do not accept!
  - They're not getting healthier after you leave
- Maintenance who? when? how?
  - Sediment, trash, mulch, pruning, etc.



#### Common Under-considered Pitfalls

- Too few woodies
  - All gardens need structure
- Too many types of flowering perennials Beauty is more than flowers
- Poor seasonal balance
  - Summer only comes once a year
- Not planting en masse
  - Simplifies maintenance and increases bang!



# Poor Soil Prep









# Lousy plants





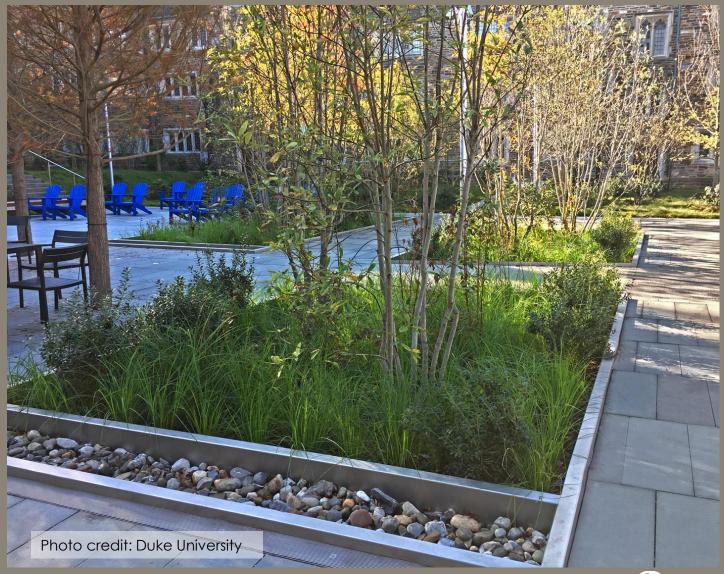


## Need More Woodies/Seasonality





## More Woodies/Seasonality





### More Woodies/Seasonality





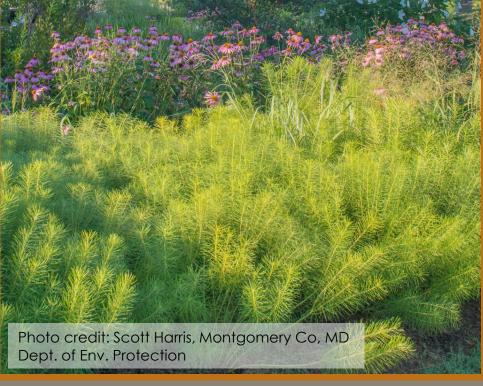
## Too Many Types of Perennials





# Use En Masse Designs







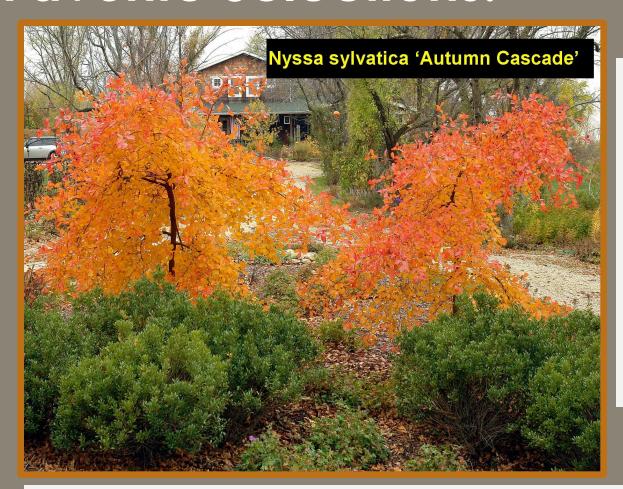
### **Ongoing Maintenance**



Trash pick up

• WEED!





#### Blackgum

- Weeping form
- Slow growing
- 12' tall x 8' wide
- Electric fall color
- Needs low pH soils
- Basin to Upland

Nyssa sylvatica 'Autumn Cascade'



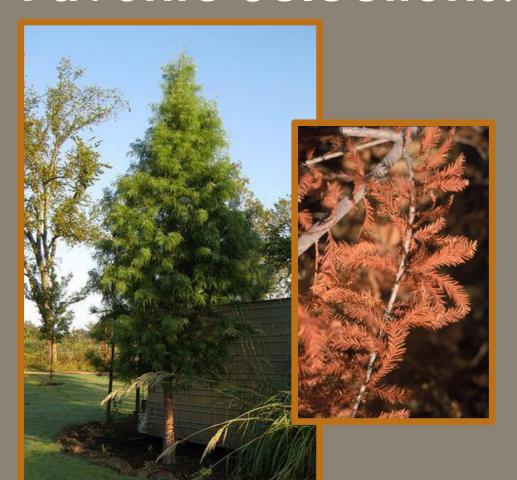


#### Sweetgum

- Columnar form
- 40' tall x 5' wide
- Burgundy fall color
- Produces few fruit
- Basin to Upland

Liquidambar styraciflua 'Slender Silhouette'





#### **Bald Cypress**

- Columnar form
- 60' tall x 20' wide
- Orange-gold fall color
- Deciduous
- Basin to Upland

#### Taxodium distichum 'Shawnee Brave'





#### Spicebush

- Airy small tree
- 8' tall x 8' wide
- Golden fall color
- Pollinators & birds
- Basin to Upland

Lindera benzoin





#### Winterberry Holly

- Rounded, dwarf shrub
- 3-4' tall and wide
- A natural meatball
- Persistent berries
- Need 1 ♂ to 8 ♀s
- 'Winter Red' specimen
- Basin to Upland

llex verticillata 'Red Sprite'





#### **American Arborvitae**

- Rounded, <u>dwarf</u> shrub
- 2-3' tall and wide
- A natural meatball
- Evergreen
- Great for geometry
- Slope to Upland

Thuja occidentalis 'Mr. Bowling Ball'





**Shrubby Dogwoods** 

C. racemosa (grey)

C.amomum (silky)

C. sericea (red/yellow twigs)

- Cane forms & medium shrubs
- Varied sizes
- Great stems, berries, leaves, erosion control,...
- Great for geometry
- Basin to Upland

Shrubby Cornus spp.





Various Rushes

Juncus effusus

Juncus inflexus 'Blue Dart'

- Perennial grass
- 'Thriller', excellent en masse
- Fibrous roots hold soil in high energy areas
- Basin to Slope

Juncus spp.





River Oats/Sea Oats

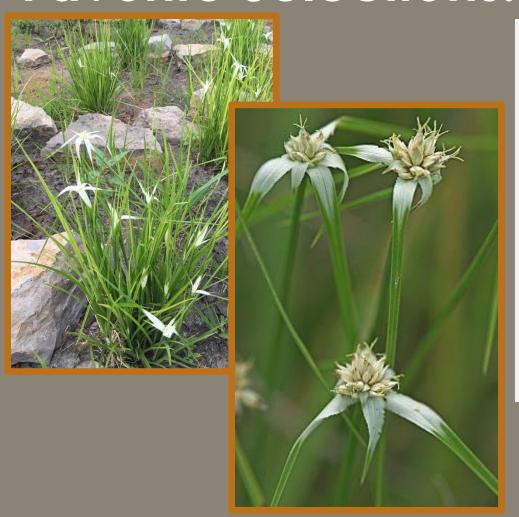
'Little Tickler' compact form

'River Mist' variegated

- Perennial grass
- Graceful, prefer cultivars
- Needs "dedicated" space
- Multi-season interest
- Basin to Upland

Chasmanthium latifolium





#### White Star Sedge

- Perennial, clump-forming
- Petite
- Showy bracts
- Good ground-holder
- Attracts pollinators
- Basin

Rhynchospora colorata





#### **Large Coneflower**

- "See-through" perennial
- Huge, grey, waxy leaves
- Blooms 6-8 feet tall
- Birds love seeds
- Multi-season interest
- Basin to Upland

Rudbeckia maxima





False Indigo

B. australis (blue)

B. sphaerocarpa (yellow)

- Shrub-like perennial
- Early summer blooms
- Sturdy form
- 3-4 feet tall and round
- Waxy-blue foliage
- Slope to Upland

Baptisia spp.





Joe-Pye Weed

(Formerly Eupatorium)

E. maculatum 'Gateway' (5-7 feet)

E. dubium 'Little Joe' (3-4 feet)

- Show-stopping blooms
- Mid-late summer
- Great for wildlife
- Multi-season interest
- Basin to Upland

Eutrochium spp.





#### Blue Flag Iris

- Adds textural variety
- Holds soils in high energy areas
- Tolerates moisture swings
- Mid summer blooms
- Early green-up
- Basin to Upland

Iris versicolor



# Public Projects are not your backyard.

Keep it Simple and Successful.







# Thanks for your time! Questions?

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